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WHAT IS CLAIMED IS:

*Su b*  
~~1. A molecular adjuvant for enhancing an immune response to an immunogen comprising: a targeting ligand having binding affinity for a characteristic determinant of an antigen presenting cell, said targeting ligand being functionally linked to said immunogen, whereby binding of said molecular adjuvant to said antigen presenting cell determinant activates said antigen presenting cell, effecting delivery of said immunogen to an antigen presenting pathway of said antigen presenting cell.~~

*D*  
~~2. A molecular adjuvant as claimed in claim 1, wherein said targeting ligand binds specifically to a determinant comprising an immunomodulatory receptor of said antigen presenting cell.~~

*D*  
~~3. A molecular adjuvant as claimed in claim 2, wherein said targeting ligand binds specifically to a receptor selected from the group consisting of C5a receptor, IFN-gamma receptor, CD21 (C3d) receptor, CD64 (Fc<sub>g</sub>RI) receptor, and CD23 (FceRII) receptor.~~

*D*  
~~4. A molecular adjuvant as claimed in claim 3, wherein said targeting ligand binds specifically to a C5a receptor and is selected from the group consisting of C5a and a peptide agonist analog of C5a comprising the C-terminal ten residues of C5a.~~

*D*  
~~5. A molecular adjuvant as claimed in claim 4, wherein said targeting ligand is a peptide comprising the sequence YSFKPMPLaR, which is SEQ ID NO:1.~~

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*D*  
~~6. A molecular adjuvant as claimed in claim 1, comprising a targeting ligand and an immunogen~~

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having the sequence YKQGGFLGLYSFKPMPLaR.

7. A molecular adjuvant as claimed in claim  
1, wherein said targeting moiety and said immunogen  
are linked by a spacer moiety.

8. A molecular adjuvant as claimed in claim  
3, wherein said targeting ligand binds specifically to  
an IFN-gamma receptor and is selected from the group  
10 consisting of IFN-gamma and a peptide analog of IFN-  
gamma comprising the N-terminal 39 residues of INF-  
gamma.

9. A molecular adjuvant as claimed in claim  
15 8, wherein said targeting ligand is a peptide  
comprising a sequence selected from the group  
consisting of

HGTIVIESLESLNYYFNFFGIDVEEKSLFLDIWRNWQKDG,  
which is Sequence I.D. No. 3; and

20 QDPYVKEAENLKKYFNAGHSDVADNGTLFGIKNWKEE, which  
is Sequence I.D. No. 4.

10. A molecular adjuvant as claimed in  
claim 1, wherein said immunogen comprises at least one  
25 substance selected from the group consisting of  
peptides, glycopeptides, phosphopeptides,  
lipopeptides, proteins, glycoproteins,  
phosphoproteins, lipoproteins, carbohydrates, nucleic  
acids and lipids.

30 11. A molecular adjuvant as claimed in  
claim 10, wherein said immunogen comprises a peptide.

35 12. A molecular adjuvant as claimed in  
claim 10, wherein said peptide comprises an epitope of  
human mucin-1.

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5 13. A molecular adjuvant as claimed in  
claim 10, wherein said immunogen comprises a protein.

10 14. A molecular adjuvant as claimed in  
claim 13, wherein said protein comprises serum amyloid  
A (SAA).

15 15. A molecular adjuvant as claimed in  
claim 14 having the formula SAA-K-Ahx-YSFKPMPLaR,  
which is SAA-conjugated SEQ ID NO:8.

16. A molecular adjuvant as claimed in  
claim 1, wherein said immunogen comprises a tumor-  
specific antigen.

20 17. A composition for enhancing an immune  
response to an immunogen in a subject in which said  
enhanced immune response is desired, said composition  
comprising the molecular adjuvant of claim 1 in a  
biologically compatible medium.

25 18. A method for activating an antigen  
presenting cell for inducing an enhanced immune response  
to an immunogen, said immunogen being delivered to the  
antigen presenting pathway of said antigen presenting  
cell, said method comprising binding to a characteristic  
surface determinant of said antigen presenting cell a  
molecular adjuvant as claimed in claim 1.

35 19. A method as claimed in claim 18,  
wherein binding of said molecular adjuvant to said  
antigen presenting cell induces a humoral immune  
response.

40 20. A method as claimed in claim 18,  
wherein binding of said molecular adjuvant to said  
antigen presenting cell induces a cellular immune

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response.

21. A method as claimed in claim 18,  
wherein said antigen presenting cell is selected from  
5 the group consisting of monocytes, dendritic cells,  
macrophages and B cells.

22. A method for eliciting an antigen  
presenting cell-mediated immune response in a host  
10 susceptible to infection by an antigen containing  
disease causing agent, said method comprising  
administering to said individual a molecular adjuvant,  
as claimed in claim 1, wherein said immunogen  
comprises the antigen of said disease causing agent,  
in an amount effective for eliciting said immune  
response.

23. A method for eliciting an immune  
response to a tumor-associated antigen, said method  
20 comprising administering to a host having a tumor  
expressing said tumor-associated antigen a molecular  
adjuvant as claimed in claim 1, wherein said immunogen  
comprises said tumor-associated antigen, in an amount  
effective for eliciting said immune response.

25 24. A method for the production of  
antibodies to an immunogen, comprising:

- a) immunizing an animal with an immunologically effective amount of the molecular adjuvant of claim 1;
- b) isolating antibodies <sup>from</sup> sera of said animal; and
- c) recovering said isolated antibodies.

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